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EXHIBIT 51

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18
UNITED STATES DISTRICT COURT

19
NORTHERN DISTRICT OF CALIFORNIA

20
RICHARD KADREY, et al., | Case No. 3:23-cv-03417-VC

21
    Individual and Representative Plaintiffs, | **DEFENDANT META PLATFORMS, INC.'S**

22
    v. | **FURTHER SUPPLEMENTAL AND AMENDED RESPONSES AND OBJECTIONS TO PLAINTIFFS' FIRST SET OF INTERROGATORIES**

23
META PLATFORMS, INC., a Delaware
corporation;
24

25
                                        Defendant.

26
Trial Date: None
Date Action Filed: July 7, 2023

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1   of "corporate seniority," as certain individuals may be of equivalent or otherwise indistinguishable

2   seniority.

3   Meta objects to this Interrogatory as overbroad, unduly burdensome, and disproportionate

4   to the needs of the case and seeks information that is not relevant to the parties' claims and defenses,

5   in particular to the extent it seeks information concerning all past and present directors, officers,

6   and board members of Meta, irrespective of the time period relevant to Plaintiffs' allegations, or

7   the role of said individuals in the conduct at issue in Plaintiffs' complaint, which concerns language

8   models that were only recently released.

9   Meta will not respond to this Interrogatory. Meta instead refers Plaintiff to the Investor

10   Relations   (https://investor.fb.com/home/default.aspx)   and   Company   Info

11   (https://about.meta.com/company-info/) pages on its website, which contain information about

12   present Meta leadership.

13   **INTERROGATORY NO. 7:**

14   In order of corporate seniority, Identify by name, job title, and date, all Persons, Including

15   employees from other businesses, contractors, vendors, and other non-employees of Your business,

16   previously and currently responsible for, or having oversight or control over the training,

17   engineering, development, ethics, safety, or alignment of the Meta Language Models, and any

18   iterations, versions, or variations thereof. Include in Your response:

19   a.   For each Person, a description of his or her area of expertise;

20   b.   For each Person, a description of whether such Person was previously or is currently

21   responsible for, or has or had oversight or control over ethics, safety, or alignment related to the

22   Meta Language Models;

23   c.   For each Person, a description of whether such Person was previously or is currently

24   responsible for, or has or had oversight or control over researching, analyzing, reporting on,

25   mitigating, or remediating the propensity of the Meta Language Models to emit protected

26   expression from the Training Data;

27   d.   For each Person responsive to subpart b above, provide a description of whether

28   such Person created Documents or Communications Concerning the ethics or legality of any

1 Training Data gathered or used by You;

2   e.   Provide a description of the mitigations and remediations so undertaken by any

3 Persons responsive to subpart c. above;

4   f.   For Persons previously employed, Identify whether they left You voluntarily or

5 involuntarily, and whether any disagreement with You about Training Data was a factor in their

6 separation from You.

7 **RESPONSE TO INTERROGATORY NO. 7:**

8   Meta incorporates by reference its objections and definitions above, including to the terms

9 "You," "Communications," and "Meta Language Models."

10   As an initial matter, Meta objects to this Interrogatory because it consists of *at least* four

11 Interrogatories, which count toward Plaintiffs' limit. For example, subparts (d), (e), and (f) are not

12 subsumed within and necessarily related to the primary question. In answering the Interrogatory,

13 Meta does not waive this objection.

14   Meta objects to this Interrogatory because, on its face, it does not exclude legal advice or

15 opinions, which are subject to attorney-client privilege and/or attorney work product doctrine, in

16 particular as the subject matter of the Interrogatory encompasses policies and procedures that are

17 legal in nature. Meta will not respond to subpart (d). Meta also will not respond to subpart (e) to

18 the extent it seeks information subject to attorney-client privilege and/or attorney work product

19 doctrine.

20   Meta objects to this Interrogatory as vague and ambiguous as to the terms "safety" and

21 "ethics," and the phrase "iterations, versions, or variations thereof," all of which are undefined (and

22 as to "any iterations, versions, or variations thereof" as overly broad and unduly burdensome).

23   Meta also objects to the reference to "date" as vague, ambiguous, and unintelligible as to

24 the subject of this Interrogatory.

25   Meta further objects to the portion of this Interrogatory requiring Meta to list individuals by

26 order of "corporate seniority," as certain individuals may no longer be employed by Meta (and thus

27 have no seniority), while others may be of equivalent or otherwise indistinguishable seniority. Meta

28 will identify individuals in alphabetical order of their last names.

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META'S FURTHER SUPP. & AMENDED RESP
& OBJ'S TO PLTFS' FIRST SET OF ROGS
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1   Meta objects to this Interrogatory as vague and ambiguous as to the phrase "responsible for,

2 or having oversight or control," which, read broadly, would include a large number of individuals

3 regardless of the significance of their role. Meta will construe this Interrogatory to seek information

4 concerning individuals in a managerial role or who may be regarded as lead developers with

5 primary responsibility for the training, engineering, development, or alignment of the Meta

6 Language Models (as construed above).

7   Meta objects to this Interrogatory as overbroad, unduly burdensome, and disproportionate

8 to the needs of the case and seeks information that is not relevant to the parties' claims and defenses,

9 in particular to the extent it seeks information concerning issues unrelated to Plaintiffs' direct

10 copyright infringement claim.

11   Meta objects to this Interrogatory to the extent that it seeks information that is not within

12 Meta's possession, custody, or control, in particular as to individuals who are no longer with the

13 company.

14   Meta objects to the counterfactual presumption and characterization of its language models

15 as having a "propensity to emit protected expression" from training data.

16 **Meta's Further Supplemental and Amended Response to Interrogatory No. 7:**

17   Subject to and without waiving the foregoing objections, and pursuant to the terms of the

18 Protective Order and the ESI Order, Meta responds as follows:

19   Meta refers Plaintiffs to Appendix A.1 to the publicly available paper "Llama 2: Open

20 Foundation and Fine-Tuned Chat Models," which identifies the following individuals as having

21 leadership roles in connection with development of Llama 2:

22 ● **Science and Engineering Leadership:**

23   ○ Guillem Cucurull (Research Engineer, former Meta employee) – Mr. Cucurull left

24   Meta voluntarily. Meta is unaware of any information to suggest that his departure

25   from Meta concerned a disagreement with Meta over training data.

26   ○ Naman Goyal (Software Engineer)

27   ○ Louis Martin (Research Scientist, former Meta employee) – Mr. Martin left Meta

28   voluntarily. Meta is unaware of any information to suggest that his departure from

1   Meta concerned a disagreement with Meta over training data.

2   o   Thomas Scialom (Research Scientist)

3   o   Ruan Silva (Software Engineer)

4   o   Kevin Stone (Research Engineer, former Meta employee) – Mr. Stone left Meta

5   voluntarily. Meta is unaware of any information to suggest that his departure from

6   Meta concerned a disagreement with Meta over training data.

7   o   Hugo Touvron (Research Scientist)

8   ● **Technical and Management Leadership:**

9   o   Sergey Edunov (Director, AI Research)

10   o   Angela Fan (Research Scientist)

11   o   Melanie Kambadur (Research Engineering Manager)

12   o   Sharan Narang (Research Scientist Manager)

13   o   Aurelien Rodriguez (Software Engineering Manager, former Meta employee) – Mr.

14   Rodriguez left Meta voluntarily. Meta is unaware of any information to suggest that

15   his departure from Meta concerned a disagreement with Meta over training data.

16   o   Robert Stojnic (Engineering Manager, former Meta employee) – Mr. Stojnic left

17   Meta voluntarily. Meta is unaware of any information to suggest that his departure

18   from Meta concerned a disagreement with Meta over training data.

19   Meta has produced a copy of the Llama 2: Open Foundation and Fine-Tuned Chat Models

20 paper as Meta_Kadrey_00000001-00000077. Excluding Mr. Silva and Mr. Martin, each of the

21 foregoing listed individuals also contributed to development of Llama 3. Pursuant to Rule 33(d),

22 Meta also refers Plaintiffs to the paper titled "The Llama 3 Herd of Models," published by Meta on

23 July 23, 2024, for further information.

24   Meta also identifies the following individuals as having leadership roles in connection with

25 development of Llama 2 and Llama 3:

26   ● Mike Clark (Director, Product Management)

27   ● Ahmad Al-Dahle (VP Gen AI)

28   ● Chaya Nayak (Director, Product Management)

1   In addition, Meta identifies the following individuals as having leadership roles in

2   connection with development of Llama 1:

3   ● Joelle Pineau (VP, AI Research)

4   ● Edouard Grave (Research Scientist, former Meta employee) – Mr. Grave was a

5   research scientist at Meta. Mr. Grave was one of the lead developers of Llama 1.

6   Mr. Grave left Meta voluntarily. Meta is unaware of any information to suggest that

7   his departure from Meta concerned a disagreement with Meta over training data.

8   ● Guillaume Lample (Research Scientist, former Meta employee) – Mr. Lample was

9   a research scientist at Meta. Mr. Lample was one of the lead developers of Llama

10   1. Mr. Lample left Meta voluntarily. Meta is unaware of any information to suggest

11   that his departure from Meta concerned a disagreement with Meta over training data.

12   ● Aurelien Rodriguez (Software Engineering Manager, former Meta employee)

13   ● Hugo Touvron (Research Scientist)

14   **This response is designated as Highly Confidential – Attorney's Eyes Only under the**

15   **Protective Order.**

16   With respect to steps taken by Meta to reduce the possibility, if any, that Meta Language

17   Models (as construed above) could reproduce verbatim content contained within its training data,

18   Meta responds as follows:

19   With respect to Llama 2, Meta undertook the following actions to reduce the likelihood that

20   memorization of training data could occur.

21   ● Deduplicated texts within training data where practicable;

22   ● Trained model with only one epoch or less for certain datasets;

23   ● Application of decoding methods to statistically reduce the likelihood of

24   memorization;

25   ● Used annotations and red teaming during fine-tuning to test for memorization;

26   ● Conducted tests on the model to evaluate the extent to which training data was

27   memorized and determined that the memorization rate of strings of 50 words or

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1   more was approximately 0% in response to ordinary prompts and less than .2% in

2   response to adversarial prompts.

3   With respect to Llama 3, the process was similar. However, use of datasets was typically

4   not limited to one epoch because Meta determined that, for Llama 3, memorization of content of a

5   given dataset did not appreciably increase with multiple epochs. In addition, Meta improved its

6   dataset deduplication process.

7   Meta refers to the deposition testimony of Thomas Scialom which discusses the steps

8   undertaken as a part of RLHF of Llama 2 in order to try to reduce the likelihood that the model

9   could reproduce verbatim content from any training data, namely, that the model was finetuned to

10   respond to requests to reproduce certain types of outputs with pre-written responses. T. Scialom

11   12/05/2024 Dep. Tr. 122:11-125:17; *see also* H. Touvron 12/03/2024 Dep. Tr. 257:3-259:6.

12   Similar techniques were adopted for more recently released versions of Llama.

13   In addition, for Meta AI, Meta has implemented a feature that compares Meta AI output to

14   a database of music lyrics and, if the platform detects that the output contains song lyrics within

15   the database (as measured by a semantic distance algorithm, and a configured matching threshold),

16   the output is removed from display to the user. *See* Meta_Kadrey_00186180.

17   **INTERROGATORY NO. 8:**

18   Identify all software, databases, or services previously and currently used by You for

19   training, maintaining, supervising, managing, analyzing, programming, updating, troubleshooting,

20   diagnosing, testing or modifying the Meta Language Models.

21   **RESPONSE TO INTERROGATORY NO. 8:**

22   Meta incorporates by reference its objections and definitions above, including to the terms

23   "You" and "Meta Language Models."

24   As an initial matter, Meta objects to this Interrogatory because it consists of twenty-seven

25   Interrogatories, which count toward Plaintiffs' limit. Specifically, "software," "databases" and

26   "services" are all broad, distinct subject matters, as are "training," "maintaining," "supervising,"

27   "managing," "analyzing," "programming," "updating," "troubleshooting [and] diagnosing",

28   "testing," and "modifying." In answering the Interrogatory, Meta does not waive this objection.

COOLEY LLP
ATTORNEYS AT LAW

META'S FURTHER SUPP. & AMENDED RESP
& OBJ'S TO PLTFS' FIRST SET OF ROGS
3:23-CV-03417-VC

1   Dated: December 13, 2024   COOLEY LLP

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1   <u>VERIFICATION</u>

2   I, Michael Clark, declare:

3   I am an employee of Meta Platforms, Inc. ("Meta"), a corporation organized and existing

4   under the laws of Delaware, which is the Defendant in the above-entitled action, and I have been

5   authorized to make this verification on its behalf.

6   I have read the following documents:

7   • Meta's Further Supplemental and Amended Responses and Objections to Plaintiffs'

8   First Set of Interrogatories.

9   • Meta's Further Supplemental and Amended Responses and Objections to Plaintiffs'

10   Second Set of Interrogatories.

11   • Meta's First Supplemental Responses and Objections to Plaintiffs' Third Set of

12   Interrogatories

13   I believe, based on personal knowledge or upon information and belief, that those responses

14   are true and correct.

15   I declare under penalty of perjury under the laws of the United States that the foregoing is

16   true and correct.

17   Executed at Denver, Colorado   on December 13, 2024.

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19

20   Michael Clark

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VERIFICATION OF RESPONSES TO PLAINTIFFS' INTERROGATORIES
CASE NO. 3:23-CV-03417-VC